Patent claims

1. A laser diode component comprising a laser diode bar on which a specific operating voltage is impressed during operation,
characterized in that
a bridging element is connected in parallel with the laser diode bar, which bridging element, when the specific operating voltage is impressed on the associated laser diode bar, transmits a smaller current than the laser diode bar or transmits no current and which bridging element switches over to such a low-impedance state that the laser diode bar is bridged as soon as the voltage drop across the laser diode bar exceeds the specific operating voltage by a predefined voltage value.

2. The laser diode component as claimed in claim 1,
characterized in that
the bridging element changes over to the state that bridges the laser diode bar as soon as the voltage impressed on the bridging element is at least 200 mV higher than the specific operating voltage of the associated laser diode bar.

3. The laser diode component as claimed in claim 1 or 2,
characterized in that
the bridging element has at least one diode which is forward-biased when the specific operating voltage is impressed on the associated laser diode bar and the diffusion voltage of which is at least 200 mV higher than the operating voltage of the associated laser diode bar.

4. The laser diode component as claimed in claim 2 or 3,
characterized in that

the bridging element has a diode based on AlGaAs semiconductor material.

5. The laser diode component as claimed in claim 2 or 3,
characterized in that
the bridging element has a series circuit comprising a plurality of diodes.

6. The laser diode component as claimed in claim 5, characterized in that
the series circuit has three Si diodes.

7. The laser diode component as claimed in claim 2, characterized in that
the bridging element has at least one zener diode, the breakdown voltage of which is at least 200 mV higher than the operating voltage of the associated laser diode bar.

8. The laser diode component as claimed in claim 2, characterized in that
the bridging element is a triac, the switching voltage of which is at least 200 mV higher than the operating voltage of the associated laser diode bar.

9. The laser diode component as claimed in at least one of claims 1 to 8,
characterized in that
each laser diode bar and the associated bridging element are applied on a common heat sink, in that the bridging element is fixed on the heat sink by means of a first connecting means and the laser diode bar is fixed on the heat sink by means of a second connecting means, and in that the melting point of the first connecting means is at a higher temperature than that of the second connecting means.

10. The laser diode component as claimed in claim 9, characterized in that
the first connecting means is a hard solder and the second connecting means is a soft solder.

11. A circuit arrangement comprising a plurality of laser diode bars which are connected up in series with one another and on which a specific operating voltage is in each case impressed during operation of the series circuit,
characterized in that
a bridging element is connected in parallel with each laser diode bar, which bridging element, when the specific operating voltage is impressed on the associated laser diode bar, transmits a smaller current than the laser diode bar or transmits no current and which bridging element switches over to such a low-impedance state that the laser diode bar is bridged as soon as the voltage drop across the laser diode bar exceeds the specific operating voltage by a predefined voltage value.

12. The circuit arrangement as claimed in claim 11, characterized in that
the bridging element changes over to the state that bridges the laser diode bar as soon as the voltage impressed on the bridging element is at least 200 mV higher than the specific operating voltage of the associated laser diode bar.

13. The circuit arrangement as claimed in claim 11 or 12,
characterized in that
the bridging element has at least one diode which is forward-biased when the specific operating voltage is impressed on the associated laser diode bar and the diffusion voltage of which is at least 200 mV higher than the operating voltage of the associated laser

diode bar.

14. The circuit arrangement as claimed in claim 12 or 13,
characterized in that
the bridging element has a diode based on AlGaAs semiconductor material.

15. The circuit arrangement as claimed in claim 12 or 13,
characterized in that
the bridging element has a series circuit comprising a plurality of diodes.

16. The circuit arrangement as claimed in claim 15,
characterized in that
the series circuit has three Si diodes.

17. The circuit arrangement as claimed in claim 12,
characterized in that
the bridging element has at least one zener diode, the breakdown voltage of which is at least 200 mV higher than the operating voltage of the associated laser diode bar.

18. The circuit arrangement as claimed in claim 12,
characterized in that
the bridging element is a triac, the switching voltage of which is at least 200 mV higher than the operating voltage of the associated laser diode bar.

19. The laser diode component as claimed in at least one of claims 11 to 18,
characterized in that
each laser diode bar and the associated bridging element are applied on a common heat sink, in that the bridging element is fixed on the heat sink by means of a first connecting means and the laser diode bar is

fixed on the heat sink by means of a second connecting means, and in that the melting point of the first connecting means is at a higher temperature than that of the second connecting means.

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20. The circuit arrangement as claimed in claim 19, characterized in that
the first connecting means is a hard solder and the second connecting means is a soft solder.